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EXAMINER	
PICH, PONNOREAY	

ART UNIT	PAPER NUMBER
2135	

DATE MAILED: 04/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/691,999	AGARWAL ET AL.	
	Examiner	Art Unit	
	Ponnoreay Pich	2135	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-33* is/are rejected.

7)☒ Claim(s) *20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 October 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4/5/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

TLE

DETAILED ACTION

Claims 1-33 have been examined and are pending.

Information Disclosure Statement

The IDS submitted by the applicant has been considered.

Drawings

The drawings are objected to because in Fig 1, item 40 is disclosed in the specification as being a Directed Acyclic Graph (DAG) on p6, lines 19-25. The examiner respectfully asserts that item 40 as represented in Fig 1 shows an Undirected Graph. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities: On page 11, lines 4-5, the examiner respectfully suggests that the applicant use commas where necessary so as to make the cited sentence more coherent when read. Also, in the same sentence, the examiner believes that the applicant meant to use "its" instead of "it's." For example, "...a set of ACL's inherited by an item, whose item identity is an ItemID, from **its** parents in the store."

Appropriate correction is required.

Claim Objections

Claim 20 is objected to because of the following informalities:

1. As per claim 20, "...comprising a component to at least one of create..." doesn't make sense. The examiner believes that the applicant meant to recite "...comprising a component to at least do one of the following: create...."

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-11, 19, 27, and 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2-11, 19, 27, and 33 each lacks a transition phrase after the preamble of each claim that renders each claim indefinite.

Claim 4 recites the limitation "the database" in line 2. There is insufficient antecedent basis for this limitation in the claim. The examiner notes that a data store contains database files. However, it is unclear if there is more than one database contained by the data store of claim 1 and if there is, to which database claim 4 is referring.

Claim 33 recites the limitation "the security table" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-20, 22-29, and 33 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 1:

Claim 1 refers to a data storage security system comprising at least one hierarchical data structure and a security component. The examiner asserts that a data structure no matter how it is arranged is still just software. Further, on page 6, lines 5-8 of the specification, the applicant disclosed that the term “component” and “system” could refer to just software or software in execution. The security policy applied by the

security component can be defined by software alone. The data items referred to in claim 1 also can be software alone. Also, the data store referred to in claim 1 also can be implemented as software alone. As such, the security component referred to in the claim reads on just software. Thus no tangible subject matter is disclosed by claim 1. The examiner notes that the applicant can easily fix this 101 problem by reciting in the preamble instead "A data storage security system using a computer" as the applicant discloses in the specification on p22 the environment in which the invention can be used includes a computer.

Claim 2:

Claim 2 further defines the data structure of claim 1. No tangible subject matter is disclosed.

Claim 3:

Claim 3 further defines the data structure of claim 2. No tangible subject matter is disclosed.

Claim 4:

Claim 4 recites a further step implemented by the software security component of claim 1. No tangible subject matter is disclosed.

Claim 5:

Claim 5 further defines the software security policy of claim 4. No tangible subject matter is disclosed.

Claim 6:

Claim 6 further defines the software security policy of claim 1. No tangible subject matter is disclosed.

Claim 7:

Claim 7 discloses the software security component includes an Access Control List having one or more Access Control Entries. A list is a software data structure and the entries in a list are also just software entries. No tangible subject matter is disclosed.

Claim 8:

Claim 8 further defines the software list of claim 7. No tangible subject matter is disclosed.

Claim 9:

Claim 9 refers to a plurality of Access Control Lists, which is still just software. No tangible subject matter is disclosed.

Claim 10:

Claim 10 refers to the software security component specifying a set of principals. The examiner asserts that the principals are software principals. No tangible subject matter is disclosed.

Claim 11:

Claim 11 refers to the security component of claim 1 including lists and a security identifier. Lists are abstract data structures. A security identifier can be implemented in just software. No tangible subject matter is disclosed.

Claim 12:

Claim 12 refers to an ordering component. As discussed in claim 1, a component in the applicant's invention can refer to just software, so no tangible subject matter is disclosed.

Claims 13 and 14:

Claims 13 and 14 each refers to an ordering algorithm. An algorithm is an abstract idea and is not statutory subject matter.

Claim 15:

Claim 15 refers to a software component. No tangible subject matter is disclosed.

Claim 16:

Claim 16 refers to the software security component further comprise a software list. No tangible subject matter is disclosed.

Claim 17:

Claim 17 refers to the software security component further comprises an access mask. The access mask is disclosed on p16, lines 13-19 and is a software access mask. No tangible subject matter is disclosed.

Claim 18:

"Functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. The definition of "data structure" is a "physical or logical relationship among data elements, designed to support specific data manipulation functions." "Nonfunctional descriptive material" includes but is not limited to music, literary works and compilation, or mere

arrangement of data. The examiner asserts that claim 18 as recited imparts no functionality when employed as a computer component. The security table as disclosed on p18, lines 2-16 is a mere arrangement of data.

Claim 19:

Claim 19 refers to fields that the security table can include. The examiner asserts that the fields as recited are abstract ideas (i.e. variables) and are non-statutory subject matter.

Claim 20:

Claim 20 refers to a component which executes the steps of the algorithm as disclosed in the specification on p19, line 4-p21, line 4. The examiner asserts that the algorithm disclosed can be performed by a software component alone. No tangible subject matter is disclosed.

Claim 22:

Claim 22 refers to a method to facilitate data item security. The steps of the method are disclosed in the specification on p21, lines 5-29 and Fig 7. The examiner asserts that no tangible subject matter is disclosed in the specification as needed to perform the steps of the security process. As such, claim 23 reads on a method that can be performed by software alone.

Claims 23-28:

Claims 23-28 recite further steps and features of the software method associated with claim 22.

Claim 29:

Claim 29 is the means version of claim 22. No tangible subject matter is disclosed.

Claim 33:

Claim 33 refers to the fields of a security table. The examiner asserts that the fields recited in claim 33 are abstract ideas (i.e. variables) and as such are non-statutory subject matter.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 6-7, 10-11, 21-22, 25-27, and 29-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Belani et al (US 6,772,350).

Claim 1:

Belani discloses a data storage security system, comprising:

1. At least one hierarchical data structure associated with one or more data items (col 3, lines 39-43; col 4, lines 55-57; and col 6, lines 50-61).

2. A security component that applies at least one security policy to the data items from a global location associated with a data store (col 2, lines 60-63 and col 6, lines 50-61).

Claim 2:

Belani further discloses the hierarchical data structure is at least one of a tree structure and a containment hierarchy (Fig 5 and col 8, lines 15-26).

Claim 3:

Belani further discloses the containment hierarchy is modeled as a Directed Acyclic Graph (DAG) (col 8, lines 15-26; Fig 5 and Fig 6).

Claim 4:

Belani further discloses the security policy is mapped to one or more security regions that are associated with a database (col 6, lines 50-61 and col 9, lines 51-59).

Claim 6:

Belani further discloses the security policy is at least one of inherited by an item (col 6, lines 50-61). Belani does not explicitly disclose the security policy is at least one of explicitly mapped to an item. However, it is inherent that at least one item has a security policy explicitly mapped to the item. If this were not the case, then there would not be security policy for an item further down the hierarchy to inherit.

Claim 7:

Belani further discloses the security component includes an Access Control List having one or more Access Control Entries (col 6, lines 63-col 7, line 4).

Claim 10:

Belani further discloses the security component specifies a set of principals that are granted or denied access to perform operations on an item (col 7, lines 1-4).

Claim 11:

Belani further discloses the security component includes at least one of discretionary access control list, a system access control list, and a security identifier (col 5, lines 8-12 and col 6, lines 63-66).

Claim 21:

Belani does not explicitly define a computer readable medium having computer readable instructions stored thereon for implementing the security component of claim 1. However, Belani's system is disclosed as being used with a computer system (col 1, lines 10-13). As such, a computer readable medium having computer readable instructions stored thereon for implementing the security component of claim 1 must inherently exist.

Claim 22:

Belani discloses a method to facilitate data item security, comprising:

1. Defining at least one security policy for a hierarchical data structure (col 8, lines 15-26).
2. Defining at least one security region for the hierarchical data structure (col 8, lines 15-26 and col 9, lines 52-59).
3. Applying the security policy to the hierarchical data structure from the security region (col 8, lines 15-26).

Claim 25:

Belani further discloses processing security policies for at least one of a tree structure and a containment hierarchy (Fig 5; col 6, lines 50-62; and col 8, lines 15-26).

Claim 26:

Belani further discloses mapping security policy to a security region from a remote location from a database (col 2, lines 59-64 and 59-61).

Claim 27:

Belani further discloses the security policy is associated with an Access Control List having one or more Access Control Entries (col 6, lines 50-55).

Claim 29:

Claim 29 is the means version of claim 22 and is rejected for the same reasons.

Claim 30:

Belani discloses a computer readable medium having a data structure stored thereon, comprising:

1. A first data field related to a security region associated with a hierarchical data structure (col 6, lines 63-66).
2. A second data field that relates to a security policy (col 6, lines 50-62).

Belani does not explicitly disclose a third data field that links the security policy to the security region. However, this third field must inherently exist or there would be no way to associate the security region with a security policy.

Claim 31:

Belani further discloses a field for an access mask specifying at least one of object-specific access rights, standard access rights, and generic access rights (col 7, lines 42-48 and Fig 4).

Claim 32:

Belani does not explicitly disclose a security field for similarly protected security regions. However, one must inherently exist or similarly protected security regions would not have similar security policies. The examiner believes that the second data field disclosed in claim 30 also reads on this limitation.

Claim Rejections - 35 USC § 103

Claims 5, 12-17, 23-24, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Belani et al (US 6,772,350) in view of Dennis et al (US 6,466,932).

Claim 5:

Belani further discloses the security policy is mapped from within the database (col 6, lines 50-61). Belani does not explicitly disclose the security policy is mapped from outside the data store.

However, Dennis discloses the security policy is mapped from outside the data store, i.e. an administrator defines the policy explicitly (col 7, lines 15-21). It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to incorporate Dennis's teachings with Belani's according to the limitation recited

in claim 5. One of ordinary skills would have been motivated to do so as Dennis's teachings allow for a way for an administrator to handle any conflicting policies and to manually set group security policies (col 7, lines 7-21).

Claim 12:

Belani does not explicitly disclose an ordering component that arranges one or more Access Control Entries (ACE) in an Access Control List (ACL) to determine a security policy that is enforced for an item. However, Dennis discloses this limitation (col 7, lines 7-11 and col 8, lines 26-31).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made in light of Dennis's teachings to further modify the system disclosed by Belani according to the limitations recited in claim 12. One of ordinary skill would have been motivated to do so as Dennis teaches that it would allow for a way to handle conflicting policies (col 7, lines 7-11).

Claim 13:

Belani and Dennis do not explicitly disclose the ordering algorithm as recited in claim 13. However, Belani discloses inherited ACL's on an item (col 8, lines 63-66). Further, Dennis discloses ranking the security policies in an access list (col 8, lines 26-31) which reads on the algorithm as recited in claim 13.

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have incorporated Dennis's teachings into the combination system of Belani and Dennis according to the limitations recited in claim

13. One of ordinary skill would have been motivated to do so for the same reasons given in claim 12.

Claim 14:

Belani and Dennis do not explicitly disclose the ordering algorithm as recited in claim 14. However, Belani discloses inherited ACL's on an item (col 8, lines 63-66). Further, Dennis discloses ranking the security policies in an access list (col 8, lines 26-31). This also reads on the limitation recited in claim 14.

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have incorporated Dennis's teachings into the combination system of Belani and Dennis according to the limitations recited in claim 14. One of ordinary skill would have been motivated to do so for the same reasons given in claim 12.

Claim 15:

Belani and Dennis do not explicitly disclose further comprising a component that evaluates access rights for a given principal to a given item. However, Belani discloses that access to an item or resource is restricted by users and the users are limited to certain types of access (col 6, line 63-col 7, line 4). Therefore, there must exist a component in Belani's system that evaluates access rights for a given principal to a given item.

Claim 16:

Belani does not disclose the security component further comprises an effective access control list that is obtained by processing lists inherited by an item and adding

inheritable access control entries in an explicit access control list. However, Dennis discloses the security policy of an item can be inherited from previous lists and an administrator explicitly defining additional security policies for the item.

In light of this teaching by Dennis, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention as made to further modify the combination system of Belani and Dennis according to the limitation recited in claim 16. One of ordinary skill would have been motivated to do so for the same reasons given in claim 5.

Claim 17:

Belani further discloses the security component further comprises an access mask specifying at least one of object-specific access rights, standard access rights, and generic access rights (col 7, lines 42-48 and Fig 4).

Claim 23:

Belani discloses automatically supporting at least one inherited security policy (col 8, lines 56-66). Belani does not explicitly disclose automatically supporting at least one explicit security policy. However, Dennis discloses automatically supporting at least one explicit security policy (col 7, lines 15-21).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to further modify Belani's method according to the limitation recited in claim 23 in light of Dennis's teachings. One of ordinary skill would have been motivated to incorporate Dennis's teachings for the same reason given in claim 5.

Claim 24:

Belani does not explicitly disclose the method further comprising automatically ordering security policies. However, Dennis discloses this limitation (col 8, lines 26-31). It would have been obvious to one of ordinary skill in light of this teaching to further modify Belani's method according the limitation recited in claim 24. One of ordinary skill would have been motivate to do so for the same reason given in claim 12.

Claim 28:

Belani does not explicitly disclose automatically arranging one or more Access Control Entries in the Access Control List to determine a security policy that is enforced for an item. However, Dennis discloses this limitation (col 8, lines 26-31).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made in light of Dennis's teachings to further modify Belani's method according to the limitation recited in claim 28. One of ordinary skill would have been motivated to do so for the same reasons given in claim 12.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Belani et al (US 6,772,350) in view of applicant's admittance of prior art.

Claim 8:

Belani discloses an Access Control list associated with a containment hierarchy (Fig 5; col 6, lines 63-col 7, line 4; and col 8, lines 15-26). Belani does not explicitly disclose the Access Control List **can be associated with a holding relationship** of a containment hierarchy.

However, the applicant disclosed on in the specification that it was known in the art at the time the applicant's invention was made that an Access Control can be associated with every file or directory in a hierarchy (p2, lines 2-7). The examiner asserts that a file located in a directory constitutes a holding relationship as the directory holds the file.

It would have been obvious to one of ordinary skill in the art to modify Belani's system according to the limitation recited in claim 8. One of ordinary skill would have done so because the applicant admitted that it was known in the art that doing so would provide support for specifying a default ACL for newly created in items in a directory (p2, lines 4-7).

Claims 9 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Belani et al (US 6,772,350) in view of applicant's admittance of prior art and further in view of Dennis et al (US 6,466,932).

Claim 9:

Belani does not explicitly disclose a plurality of Access Control Lists (i.e. group policy objects) to facilitate security for the containment of hierarchy. However, Dennis discloses a plurality of Access Control Lists to facilitate security for the containment hierarchy (col 2, lines 3-7).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to further modify Belani's system according to the limitation recited in claim 9. One of ordinary skill would have done so because Dennis

discloses that it would have allowed for each ACL (policy objects) to be associated with different hierarchically-organized directory objects/regions (col 2, lines 3-7).

Claim 20:

Belani do not explicitly disclose a component to do at least one of the following: create a new item in a container, add an explicit ACL to an item, add a holding link to an item, delete a holding link from an item, delete an explicit ACL from an item and modify an ACL associated with an item.

However, the use of folders/directories in operating systems was known in the art at the time the applicant's invention was made. This was admitted by the applicant in the specification (p1, lines 9-20). A directory reads on a container and it was known that one could create a new item or file in a directory. When you create or place an item in a directory, you are using what is known as a "holding link" as the folder holds the item. When an item is deleted or moved, the holding link the item had with the folder is deleted. The applicant also admitted that it was known in the art that a file has an ACL associated with it (p2, paragraph 2). It was also known that when the file is moved from one directory to another, the ACL for the file can be updated—i.e. modified or deleted and replaced with a new ACL (p2, lines 15-17). Further, Dennis discloses adding an explicit ACL to an item (col 7, lines 15-21).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to further modify Belani's system according to the limitations recited in claim 20. One of ordinary skill would have been motivated to incorporate the previous known art because it would be a starting point for

improvements via the teachings as disclosed by Belani. One of ordinary skill would be motivated to incorporate Dennis's teachings of an explicit ACL for an item according to the limitations recited in claim 20 for the same reasons given in claim 5.

Claims 18-19 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Belani et al (US 6,772,350) in view of Sandler et al (US 2003/0217033).

Claim 18:

Belani further discloses similarly protected security regions (col 9, lines 52,-59). Belani does not explicitly disclose a **security table** for similarly protected security regions. However, there must be some sort of database used to keep track of the similarly protected security regions disclosed by Belani. Further, Sandler discloses that data in a database management system are typically stored in the form of records, which are typically presented logically in the form of a table (p1, paragraph 0002 and Fig 13A).

In light of Sandler's disclosure, it would have been obvious to one of ordinary skill in the art to further modify Belani's system according to the limitation recited in claim 18. One of ordinary skill would have done so because of typical practice in the art--Sandler discloses that a table is typically used to organize data in a database (p1, paragraph 0002) and Belani's system must have some sort of security database to keep track of the similarly protected security regions, therefore typically the security data would be organized in a security table.

Claim 19:

Belani and Sandler do not explicitly disclose the security table includes at least one of the following fields: an Item Identity, an Item Ordpath, an Explicit Item, a Path ACL, and a Region ACL. However, Sandler discloses that data in a database management system are typically stored in the form of records, which are typically presented logically in the form of a table and attributes as the columns, i.e. record fields (p1, paragraph 0002 and Fig 13A). The tables as seen in Fig 13A have record fields which reads on the fields recited in claim 19.

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made in light of common practice in the art of databases as disclosed by Sandler to further modify Belani's system according to the limitation recited in claim 19. One of ordinary skill would have been motivated to do so for the same reason given in claim 18.

Claim 33:

Belani does not explicitly disclose a security table field includes at least one of an Item identity, an Ordpath, an Explicit Item, a Path ACL, and a Region ACL. However, Sandler discloses that data in a database management system are typically stored in the form of records, which are typically presented logically in the form of a table and attributes as the columns, i.e. record fields (p1, paragraph 0002 and Fig 13A). The tables as seen in Fig 13A have record fields which reads on the fields recited in claim 33.

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made in light of common practice in the art of databases as disclosed by Sandler to further modify Belani's system according to the limitation recited in claim 33. One of ordinary skill would have been motivated to do so for the same reason given in claim 18.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ponnoreay Pich whose telephone number is 571-272-7962. The examiner can normally be reached on 8:00am-4:30pm Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PP

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SUPERVISORY PATENT EXAMINER
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